Bailey Waste Disposal Site
Hurricane Rita Reponse
Surface Water & Sediment Sample Data Evaluation

Background

As part of the Environmental Protection Agency's review of the potential remedy impacts from Hurricane Rita which hit the Gulf Coast region on September 24, 2005, a visual inspection of the Bailey Waste Disposal Site was conducted on September 28, 2005. In addition to the visual inspection, One surface water sample (i.e., BWD001) and one sediment sample (BWD002) were collected. These samples were collected at a location between the site's two landfills. (See attached Figure). The samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Target Analyte List (TAL) metals. Additionally, a VOA trip blank was shipped in the sample cooler with the samples to the laboratory. The surface water at Bailey is tidally influenced, brackish, marsh water.

Sample Results

On October 1, 2005, Tetra Tech EM Inc. provided the preliminary analytical results (copy attached).

For BWD001 (surface water), one VOC (acetone, 23 µg/L), one SVOC (3&4-Methylphenol, 2 µg/L), and 18 metals were detected (See Table 1).

For BWD002 (sediment), no VOCs, one SVOC [benzo(b)fluoranthene, 240 µg/Kg-dry], and 22 metals were detected (See Table 2).

For the VOA trip blank, dichloromethane was detected at an estimated concentration of 8.4 µg/L.

Future Actions

Previous remedial activities at the site included the excavation and off-site disposal of visually contaminated sediments (i.e., black, tarry waste). No visually impacted sediments were observed. No additional sediment work is anticipated at the site. Long-term monitoring of the landfill caps will continue as defined in the Site's Final Inspection, Maintenance, and Monitoring Plan (Parsons ES and GeoSyntec, September 1997).

For addition information, please contact the site RPM - Chris Villarreal at 214-665-6758.

TABLE 1
ANALYTICAL RESULTS SUMMARY
BAILEY WASTE DISPOSAL SITE - BWD001 - SURFACE WATER SAMPLE

Analyte	BWD001	Texas Surface Water Quality Criteria
Volatile Organic Compounds (µg/L)		
Acetone	23	NA
Dichloromethane	–	NA
Semivolatile Organic Compounds (µg/L)		
3&4 Methylphenol	2	
Metals (mg/L)		
Aluminum	0.0711	0.991 - acute Texas Surface Water Quality Criteria
Arsenic	0.00960	.190 - freshwater chronic criteria .078 - saltwater chronic criteria
Barium	0.125	2.0 - Human health protection (water & fish)
Calcium	128	NA
Chromium	0.000530	0.1 - Human health protection (water & fish) 0.0496 - saltwater chronic criteria
Cobalt	0.00415	NA
Copper	0.0938	**0.000960 - freshwater chronic criteria** **0.0036 - saltwater chronic criteria**
Iron	1.18	NA
Lead	0.000314	0.00498 - Human health protection (water & fish) 0.0053 - saltwater chronic criteria
Magnesium	317	NA
Manganese	1.97	NA
Nickel	0.00780	**0.000998 - freshwater chronic criteria** 0.0131 - saltwater chronic criteria
Potassium	102	NA
Selenium	0.0584	**0.050 - Human health protection (water & fish)**

		0.020 - freshwater acute criteria **0.005 - freshwater chronic criteria**
Sodium	2610	NA
Thallium	0.000664	0.040 - Texas ecological benchmark for water
Vanadium	0.00214	0.020 - Texas ecological benchmark for water
Zinc	0.0253	NA

Notes:

Only analytes detected in at least one sample are presented.

–	Not detected at the sample quantitation limit.
mg/L	Milligrams per liter
NA	Not available; no criteria identified for this analyte.
µg/L	Microgram per liter

TABLE 2 - ANALYTICAL RESULTS SUMMARY
BAILEY WASTE DISPOSAL SITE - BWD002 - SEDIMENT SAMPLE

Analyte	BWD002	Sediment Direct Contact Assessment
Semivolatile Organic Compounds (µg/Kg-dry)		
Benzo(b)flouranthene	240 J	NA
Metals (mg/Kg-dry)		
Aluminum	3600	58,030 - ARCS PEC
Arsenic	3.36	NA
Barium	59.0	NA
Beryllium	0.428	NA
Cadmium	0.165	0.596 - Texas Ecological Benchmark for Sediment
Calcium	3130	NA
Chromium	6.29	NA
Cobalt	4.93	NA
Copper	7.98	35.7 - Texas Ecological Benchmark for Sediment
Iron	8120	NA
Lead	21.8	35 - Texas Ecological Benchmark for Sediment
Magnesium	1640	NA
Manganese	707	**460 - Texas Ecological Benchmark for Sediment** 1081 - ARCS PEC
Mercury	0.0456	0.174 - Texas Ecological Benchmark for Sediment
Nickel	9.11	18 - Texas Ecological Benchmark for Sediment
Potassium	996	NA
Selenium	0.809	NA
Silver	0.0454	NA
Sodium	1270	NA

Thallium	0.221	NA
Vanadium	10.2	NA
Zinc	57.9	123 - Texas Ecological Benchmark for Sediment

Notes:

Only analytes detected in at least one sample are presented.

–	Not detected at the sample quantitation limit.
mg/Kg	Milligrams per kilogram
NA	Not available; no criteria identified for this analyte.
µg/Kg	Microgram per kilogram
ARCS	- Assessment and Remediation of Contaminated Sediment - values from Jones, D.S. and Suter, G.W. 1997. Toxicological Benchmarks for Screening Contaminants of Potential Concern of Potential Concern for Effects on Sediment-Associated Biota: 1997 Revision
PEC	- Probable Effects Concentration